

COSC 310: Software Engineering

Dr. Bowen Hui

University of British Columbia
Okanagan

A1 Recap

- Specifications online
- Next week's lab: TA intro + time to work on A1
- Submission:
 - Poster: in class Friday
 - Video: Connect or USB key in class Friday
 - Presentation script: Connect
 - Deadline: Jan 17th **3:30pm** (end of class)
- Friday's class on Jan 17th: In class presentation

Highschool Visit

- Monday Jan 20th, 10:30am-11:30am
- Volunteers?
 - From 10am to 11:30pm
 - Free food for your time
 - If interested: let me know at end of class

Understanding Yourself and Your Teammates

- Most interviewers look for:
 - Specific skills on paper
 - Specific traits in person
- Good hiring approaches will increase staff retention and high productivity
- **Hire for trait, train for skill**

Why Not Just Skills?

Why Not Just Skills?

- Lots of smart people to choose from

Why Not Just Skills?

- Lots of smart people to choose from
- Smart people tend to work alone
 - Not a team player
 - Don't interact well socially
 - Arrogant personalities

Why Not Just Skills?

- Lots of smart people to choose from
- Smart people tend to work alone
 - Not a team player
 - Don't interact well socially
 - Arrogant personalities
- Smart people get bored easily
 - More likely to leave
 - Wastes training cost

Why Not Just Skills?

- Lots of smart people to choose from
- Smart people tend to work alone
 - Not a team player
 - Don't interact well socially
 - Arrogant personalities
- Smart people get bored easily
 - More likely to leave
 - Wastes training cost
- Smart people are more likely to find faults in the company rules/culture
 - Less happy
 - More complaints

Goals in Hiring

- Hire those with demonstrated skills
 - Train for advanced skills as needed
- Hire those with team working experience
 - More mature and adaptable to new situations
 - A joy to work with
- Important factors to remember
 - Relatively small % of those hired are responsible for the best and worst performances
 - Individual personalities must fit with existing group dynamics

What does this mean for you?

- It's not just about ...
 - A great company name
 - The amount you get paid
 - The location
 - “Because I can”

What does this mean for you?

- It's not just about ...
 - A great company name
 - The amount you get paid
 - The location
 - “Because I can”
- You need to **know yourself**:
 - Find out what an ideal work environment is to you
 - What type of work?
 - What type of people?
 - What type of resources?

Ask Yourself

- What makes you want to work for someone else?

Ask Yourself

- What makes you want to work for someone else?
 - Money
 - “Free” training
 - Team support
 - Self-value

Typical Hiring Process

- Prepare job description
 - Prioritized most important skills needed
 - Technical + social skills
- Initial screening
 - Confirmation of what's on paper
 - Communication skills
- In-person interview
 - Personal factors: attitude, flexibility, work ethic, communication skills, do you fit with the team?
- Final selection
 - “Gut instinct”: Who's mostly likely to stay longest?

Most Common Screening Questions

- Why us?
- What is your ideal work environment?
- Think of one experience where someone was problematic at work. What did you do about it?

AMP Model

- Management model commonly adopted in corporations
- Autonomy
 - Trust employees, don't micromanage skilled ones
- Mastery
 - Tasks need to be challenging
- Purpose
 - Work should have social implications

Some of the Don'ts

- Don't apply for a job you aren't interested in
 - You won't do a good job even if you get it

Some of the Don'ts

- Don't apply for a job you aren't interested in
 - You won't do a good job even if you get it
- Don't expect a job to be perfect
 - All jobs have mundane/annoying aspects

Some of the Don'ts

- Don't apply for a job you aren't interested in
 - You won't do a good job even if you get it
- Don't expect a job to be perfect
 - All jobs have mundane/annoying aspects
- Don't be demanding
 - Comes across as rude and entitled

Some of the Don'ts

- Don't apply for a job you aren't interested in
 - You won't do a good job even if you get it
- Don't expect a job to be perfect
 - All jobs have mundane/annoying aspects
- Don't be demanding
 - Comes across as rude and entitled
- Don't look away during a conversation
 - Shows you're disengaged

Ex: Who would you hire?

- Job: You are a small company that requires an "all-around" computer support person. Responsibilities:
 - Install and manage email, web servers, existing apps
 - Provide general help desk and user support
 - Perform limited development of simple DBs, websites, programs to connect data between applications
- Candidates:
 - "Genius" - top of class in all areas, no practical or team experience, enthusiastic, knowledgeable, enjoy challenges
 - "Hacker" - near bottom of class in grades, significant programming experience and knowledge of servers, most of the knowledge is self-learned
 - "Intern" - student with average grades, involved in activities such as student lab supervision, limited knowledge of server architectures, general knowledge of email and web servers

Ex. 2: Who would you hire?

- Job: You are a large bank with systems on IBM mainframe. You need a person to join a maintenance team (currently 5 people). Responsibilities:
 - Be able to program in IBM mainframes and use network DBs
 - Work well with experienced team in a structured setting
 - Be able to construct new web interface and data warehouse
- Candidates:
 - "Mainframe veteran" - 25+ years with IBM mainframes, limited knowledge of web/new technologies
 - "Experienced developer" - 10+ years in industry as developer, significant management experience, general knowledge but no recent mainframe or web development
 - "New graduate" - limited experience, good DB and web development skills, willing to learn, no knowledge of IBM mainframes

An Actual Cover Letter

[Redacted]

Dear [Redacted]

My name is [Redacted] and I am an undergraduate finance student at [Redacted]. I met you the summer before last at Smith & Wollensky's in New York when I was touring the east coast with my uncle, [Redacted]. I just wanted to thank you for taking the time to talk to me that night.

I am writing you to inquire about a possible summer internship in your office. I am aware it is highly unusual for undergraduates from average universities like [Redacted] to intern at [Redacted], but nevertheless I was hoping you might make an exception. I am extremely interested in investment banking and would love nothing more than to learn under your tutelage. I have no qualms about fetching coffee, shining shoes or picking up laundry, and will work for next to nothing. In all honesty, I just want to be around professionals in the industry and gain as much knowledge as I can.

I won't waste your time inflating my credentials, throwing around exaggerated job titles, or feeding you a line of [crapp](#) about how my past experiences and skill set align perfectly for an investment banking internship. The truth is I have no unbelievably special skills or genius eccentricities, but I do have a near perfect GPA and will work hard for you. I've interned for Merrill Lynch in the Wealth Management Division and taken an investment banking class at [Redacted], for whatever that is worth.

I am currently awaiting admission results for [Redacted] Masters of Science in Accountancy program, which I would begin this fall if admitted. I am also planning on attending law school after my master's program, which we spoke about in New York. I apologize for the blunt nature of my letter, but I hope you seriously consider taking me under your wing this summer. I have attached my resume for your review. Feel free to call me at [Redacted] or email at [Redacted]. Thank you for your time.

Sincerely,

[Redacted]

Reactions?

- What jumps out from the letter?
- What does the content tell you about the applicant's personality?
- Would you hire this person?

Actual Comments

- Viral: **'Unapologetically Honest'** Wall Street Internship Cover Letter from 'Nothing Special' Undergrad Lands Him Every Job Offer Available
- This might be the best cover letter I've ever received.
- I wouldn't be surprised if this guy gets at least a call from every bank out there.
- This is EXACTLY how you land at great employers. BE YOU. BE HONEST. Be BRAVE.
- This is why 'friend-ing executives' in SOCIAL can be a powerful edge in landing interviews. Authenticity is the new currency of the employer/employee relationship. The Days of be (one person at work) and (another at home) is gone and dying.

Actual Comments (cont.)

- Working at a top tier school in graduate admissions, I can honestly say letters of this nature show more initiative, resourcefulness, and drive than the average statement of objectives.
- Reviewers can tell if someone wants to become part of an institution to gain knowledge rather than a name attached to their [resume].
- Sincerity is quite a redeeming quality and it does not go unnoticed.
- ... the letter is not a bulk mailing to strangers, it is a personal note to someone his uncle knows well and that he himself has already met

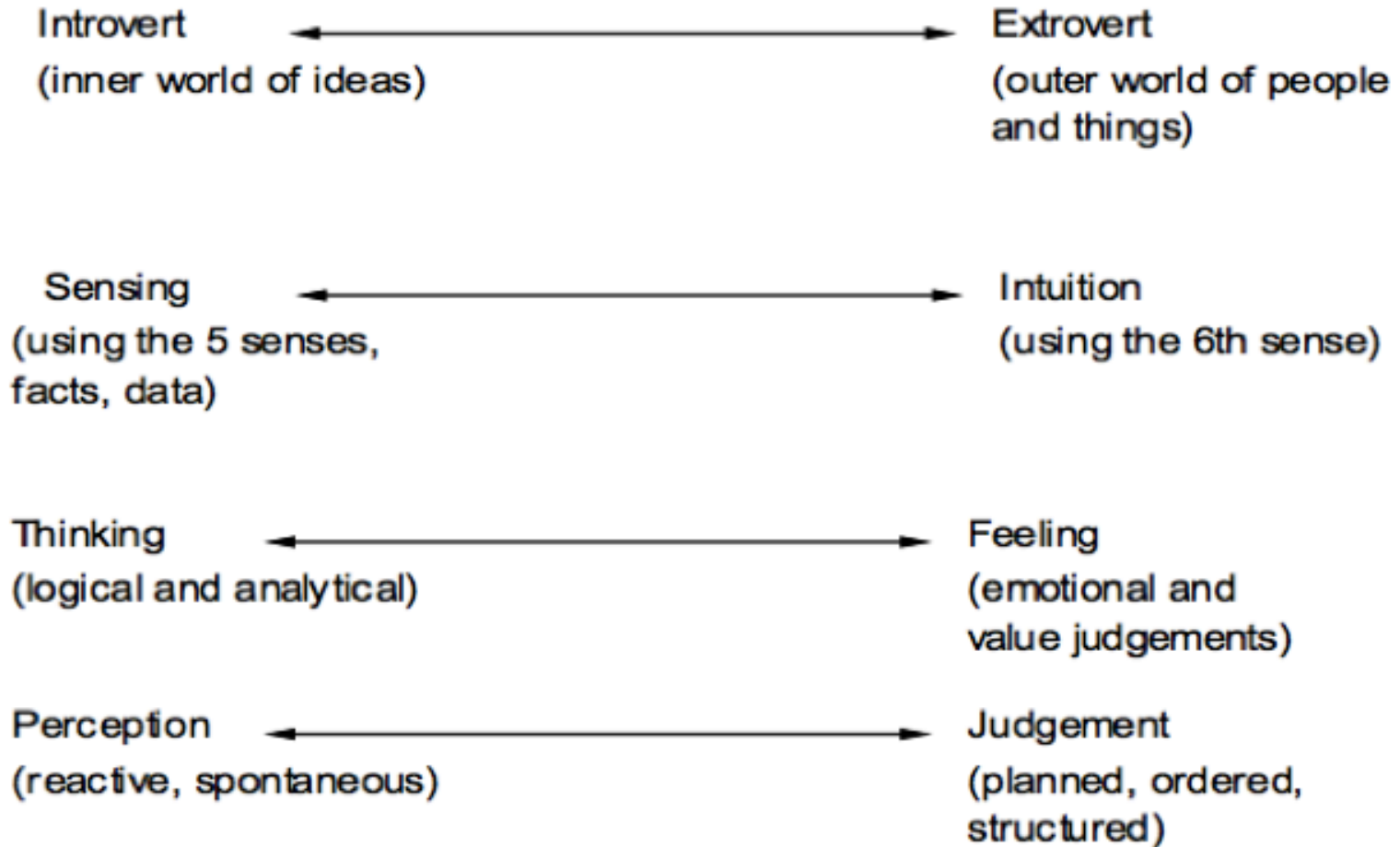
Staff Selection

- Common employment testing:
 - Aptitude
 - E.g., MS certifications, IBM advantages for programmers, ACM programming contests
 - Achievement
 - Professional exams, e.g., bar exam, medical certification, GRE graduate entrance
 - Psychometric
 - Personality and motivation tests
 - E.g., Myers-Briggs Type Inventory (MBTI), Keirsey Temperament Sort, Personal Profile Analysis

MBTI

- Identifies 4 bipolar dimensions
 - E.g., extrovert vs. introvert
- Each personality is a 4-letter code
- Total 16 different personality types
- Based on completed questionnaire
 - Different versions exist
- Usually administered by trained professionals
 - Available at Career Centres

MBTI Dimensions



MBTI Implications

<u>I</u> ntrovert/ <u>E</u> xtrovert	Source and Direction of Energy I: Internal concentration E: External Contact
<u>S</u> ensing/ <u>I</u> ntuitive	Preferred method of Information reception S: Prefers empirical sensory data E: Prefers patterns and abstractions
<u>T</u> hinking/ <u>F</u> eeling	Way of Information Processing T: makes a decision according to their <u>impersonal</u> logic F: makes a decision according to their <u>personal</u> values
<u>J</u> udging/ <u>P</u> erceiving	Way of living out processed Information J: organizes all life events P: inclined to improvisation

MBTI Career Types

- Guardians
 - ISJT (Inspector)
 - ESTJ (Supervisor)
 - ISFJ (Nurturer)
 - ESFJ (Provider)
- Artisans
 - ISTP (Craftsman)
 - ESTP (Doer)
 - ISFP (Gentle Artist)
 - ESFP (Performer)
- Rationals
 - INTJ (Mastermind)
 - ENTJ (Field Marshall)
 - INTP (Architect)
 - ENTP (Inventor)
- Idealists
 - INFJ (Counselor)
 - ENFJ (Teacher)
 - INFP (Healer)
 - ENFP (Champion)

Many Comp. Sci. are INTJ

- Career Choices for INTJ (Mastermind):
 - Scientist, engineer, professor, medical doctor, dentist, corporate strategist, organization builder, business administrator, business manager, military leader, judge, **computer programmer**, systems analyst, computer specialist, attorneys, life scientists and physicists, judges, psychologists, university teachers, and photographers.
- Career Choices for ENTJ (Field Marshall):
 - Corporate executive officer, organization builder, entrepreneur, **computer consultant**, attorneys, judge, business administrator, business manager, university professor, university administrator, systems researchers and analysts, general managers, credit investigators and mortgage brokers, psychologists and social scientists

Motivation Factors

- Basic needs:
 - Food, sleep
- Personal needs:
 - Respect, self-esteem, satisfaction, valued
- Social needs:
 - Acceptance, inclusion, human interactions

Motivating Different People

- Motivation is more effective when considering individual personalities
 - **Task-oriented**
Motivation for doing the work is the work itself
 - **Self-oriented**
Work is a means to an end, focus on achievement of individual goals
 - **Interaction-oriented**
Presence and actions of co-workers matter most
- Who do you know falls into these categories?

Implications

- **Task-oriented**
Motivation for doing the work is the work itself
- How to motivate this type of people?

Implications (cont.)

- **Self-oriented**

Work is a means to an end, focus on achievement of individual goals

- How to motivate this type of people?

Implications (cont.)

- **Interaction-oriented**

Presence and actions of co-workers matter most

- How to motivate this type of people?

Working in a Team – Self

- Motivate yourself when feeling negative
- Sell an idea/plan/solution
- Understand, predict, control your own emotions
- Remember: moods are contagious!

Working in a Team – Others

- Understand why certain things annoy/please them
- Learn what their source of motivation is
- Give credit to others
- Facilitate team problem solving
- Resolve conflicts in a win-win way